



WRANGLER

User Manual

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1 Side Key→ Volume up	2 Side Key→ Volume down
3 Side Key→ Easyedge	4 Micro-USB
5 Speaker	6 External Screen
7 Side Key→ Voice Commands	8 Side Key→ Speaker phone switch
9 Earphone Jack	10 Receiver
11 Battery cover lock	12 Camera

Note: Picture is for reference purposes only.

Keys

	Pick up Send a call Access call memory (Redial) (short key press)
	Left Soft key Right Soft key
	Navigation Key Confirm an option (press the middle of the key) Access main menu (short key press)
	Camera Key
	Back Key
	From main screen - Short key press: * - Press the middle of the Navigation Key then the * key: Locks the phone - Press the Left Soft key then the * key: Unlock the phone In Edit mode: - Short key press: Access the Symbols table

	From main screen - Short key press: # - Long key press: Activate/deactivate Vibrating Mode In Edit mode: -Short key press: Changes input methods
	From main screen -Short key press: 0 In Edit mode: -Space or zero

Main screen icons

	Signal strength received by the antenna
	Alarm clock
	There is (are) unread message(s).
	Vibrate icon
	Battery level indicator (This icon indicates full battery)
	Ring icon
	Vibrate first then ring
	Mute Icon
	Keypad locked
	USB connected
	Bluetooth On
	Earphone inserted

2. Specifications List

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Specification	Phone Type	CDM2080
Dimensions		96.5 x 48.6 x 16 .6mm
Weight		83g
Screen Display Resolution		Main Screen: 2.2" QVGA(320 x240) External Screen: 1.2" OLED
Card Type		No UIM Card
Applicable System		CDMA 800MHz/1900MHz
Bluetooth		Yes
Recorder		Yes
MMS/ WAP		Yes
Contact Capacity		1000
SMS Capacity		Up to 500
Call Records		20 each for missed, answered and dialed calls
Incoming Call Vibration		Yes
Preset Ringing Tone Type		10 ringing tones
Preset SMS Tone Type		10 tones
Call Time		Yes
Speed Dial		Yes
MP3		Yes
Camera		Yes
Input Methods		Yes
Date and Time Display		Yes
Alarm/Calculator		Yes
Games		Yes
Caller Number Display		Yes

Box contents:

- 1 phone
- 1 battery
- 1 micro USB data cable
- 1 charger
- 1 earphone
- 1 User Manual
- 1 Quick User Guide

Communication Control Keys

The 'Calling' key is used for making a call (after a number has been entered); or for viewing recent call records.

The 'End' key is used when ending a call (during dialing and communication state), exiting a menu, or return to the standby menu. Pressing and holding the End Key powers the phone or off.

Functional Keys and Soft Keys

Up, down, left and right directional keys are used for browsing menus, lists, options or content. In Standby Mode, press the direction key up to access the Calendar; down to access easyedge; left for Multimedia; and the right-direction key for Messaging. In idle mode, the Left Soft key is a shortcut key for accessing Contacts and the Right Soft key is a shortcut key for Recent Calls. In Standby Mode, press and hold the '#' key to switch between Vibrate and general modes.

Standard keypad

Numeric Keys '0' to '9', and the '*' and '#' keys are used for dialing, inputting passwords, text (including Spanish) and symbols.

■ **Note:** After the user-determined standby time, the phone's backlight will turn off to save power. When the backlight goes off, press any key on the phone's keypad to immediately turn

Language and input methods

Languages supported by this phone can be found by selecting [Menu]> [Settings]> [Phone] > [Language].

Phone input methods include Spanish, English, Numbers and Symbols. When editing, press the “#” key to switch between input methods and press the ‘ * ’ key to switch to Symbols mode.

Short message alert modes

To choose a message alert tone, press [Menu]> [Profiles]> [choose one mode]> [Personalize]> [Message alert tone].

Call alert modes

To choose a ring tone, press [Menu]> [Profiles]> [choose one mode]> [Personalize]> [Ringtone].

Find contacts

You can search for a contact by entering their name. From idle mode, press the Left Soft key [Contacts], then input the name you want to find. The screen will display all matches it back on.

Charging your battery

The battery used in the phone is rechargeable. Fully charge the new battery before using it the first time.

To ensure the battery runs in its best state, fully drain the battery at least once every month. While charging, it is normal for the battery and the phone to slightly heat-up. The phone will automatically protect itself if the battery temperature rises. The handset will sound an alert as the battery power is running out. When the power is completely drained, the handset will automatically switch off.

Note: Battery usage time varies according to how it is used. If you are using the phone when the battery level is low, the phone may switch off automatically.

Charging the Battery

Connect the charger to a main socket, and insert the charging plug into the USB port of the phone.

The phone starts charging. The battery symbol gradually lengthens from left to right as the phone charges. The phone can be charged in the power-off or standby state.

5. Basic operations

Switching on

To turn the phone on, press and hold the 'power on/off' key for three seconds. The phone will automatically search the network if the phone has no password protection. If a password for the phone is required after it is switched on, enter it when asked.

Switching off

To switch off the phone, in idle mode press and hold the 'power on/off' key for 3 seconds.

Note: Switching off the phone by removing the battery when the phone is on may cause you to lose information store on the phone.

Making a call

In idle mode, input the phone number directly via the keypad, then press the Send Key

Adjusting the volume of earpiece

During a conversation, press the up and down-direction key or the side-key “+/-” to adjust the earpiece volume.

Answering a call

To answer a call, press the ‘Call control’ key or any key if ‘Any Key Answer’ is set on. To reject a call, press the ‘power on/off’ key and the other party will then hear a busy tone.

6. Using the menu

Enter the menu

In idle mode, press the middle of the Navigation Key to access the main menu of the phone. Under the main menu interface, press any key to access the corresponding ‘Menu option list’. The main menu includes 12 options, and all menus have the function for text prompts for the corresponding function. Menus are further divided into multi-item sub-menus. Menu functions let you set, check or change the phone’s various settings to meet your personal requirements. Use the direction keys to browse and select from menus. Press the OK key or Left Soft key to confirm or to enter the sub-menu list of the selected menu. Press the “Back” key to return to the previous menu. Press the ‘power on/off’ key to exit the menu and return to the standby screen.

While editing or entering text, use the “Back” key to delete text. Press it once to delete one character and press and hold it to delete all the input characters.

Under Options, ‘On’ or ‘Activate’ enables the selected function and ‘Off’ or ‘Cancel’ disables the function.

Navigate the menus

The standby screen menu includes four options, Calendar, Multimedia, Messages and Easyedge. Press the Navigation Key to enter the listed menus.

6.1 Contacts

To enter a contact

1. From the Main Menu select the Contacts Icon.
2. Select Create New Contact.
3. Enter the contact information in the various fields
4. Select Save to store the contact information.

To dial from your contacts list

1. From the Main Menu or Standby screen select the Contacts Icon.
2. Select Contact List.
3. Select the contact.
4. Highlight the contact's phone number you would like to dial.
5. Press the Answer/Send key to dial the phone number.

In the Contacts menu from the Menu screen the following options are available:

1. Contact list
2. Display all contacts.
3. Create New Contacts :Allows the user to create new contacts
4. Group: Set up to 10 different groups.
5. Set Speed Dial: Assign speed dial keys to a phone number in the contact list. Speed dial number 1 is reserved for voice mail; 2 through 9 can be set by the user.
6. Memory info: Display the memory status of the phonebook in the phone.

Messaging is a network service. You may be required to subscribe to the service from your network operator prior to sending and receiving text messages.

A message is sent to the messages center of the network, then to the targeted user by the network. If the targeted user's phone is off or out of the network area, the network will temporarily store the message.

When the phone receives a new text message, you will be prompted and the Unread Messages icon will appear at the top of the main screen.

To open and read an incoming Text message

Select the Messages Icon, and then select the type of Message.

1. Select Text Messaging (for simple text messages, up to 515 characters), then select Inbox.
2. Select Picture Messaging (for attached, multimedia files (photos, audio, etc), then select Inbox.

New text Message (SMS)

You can create a text message in this menu. Every text message has a capacity for 515 characters. To create a new text message:

1. Select Menu.
2. Select the Messages icon.
3. Select Text Messaging.
4. Select New Text Message.
5. Use the key pad to type your message

Once the text has been entered, the following options are available, by pressing the left soft key.

- Send to: Send text message
- Insert:
 - Insert Contact info: Insert contact number.
 - Insert text template: Insert common phrases in the text message. It provides you with 12 common phrases.
- Sending Options: Set delivery priority, delivery report, immediate/schedule delivery
- Text Entry: Select input method (see Text Input Method section)
- Save to Drafts: Save to Draftbox
- Cancel Message: Return to information list interface

Inbox

The Inbox is used for reading received text messages. In the inbox, the phone can store up to 50 text messages. Press the Navigation Key up or down to browse the message list. In the message Read mode, the following options are available.

- Reply: Reply to the text message you are currently reading.
- Reply with Content: Reply with contents of the current SMS and you can also edit it.
- Delete: Delete the text message you are currently reading.
- Call: Call the current SMS sender.
- Forward: Forward the text message you are currently reading to others.
- Lock: Message locked and can't be deleted.
- Use Number: Select the phone number from the current SMS.
- Delete Multiple: Delete multiple items.
- Clean up Message: Delete all inbox messages.
- New Text Message: Create a new text message.

Outbox

This feature is used to store sent and failed messages. In the message Read mode, the following options are available.

- Send: Send the message currently being read.
- Forward: Forward the message currently being read (it can be edited).
- Delete: Delete the message currently being read.
- Delete Multiple: Delete multiple items.
- Clean up Message: Delete all Outbox messages.
- New Text Message: Create a new text message.

Sentbox

The Sentbox is used for storing sent text messages. Delete: Delete the message currently being read.

- Delete Multiple: Delete multiple items.
- Clean up Message: Delete all Outbox messages.
- New Text Message: Create a new text message.

Draftbox

After editing a new text message, choose “Save”. The message will be saved into the draft box.

- Delete: Delete the message currently being read.
- Delete Multiple: Delete multiple items.
- Clean up Message: Delete all Outbox messages.
- New Text Message: Create a new text message.

Template

There are 12 common short phrases stored in the phone. You can add, edit or delete your own common phrases.

Conversation

You can view a contact’s SMS receive and send records.

1. Enter the conversation interface, and use the Navigation Key to select the contact which you want to see. Press the Left Soft key to access the delete record/ delete all record menu.
2. On the conversation interface, press the OK key to enter the highlighted contact record, and press the Navigation Key up and down to see the record.
3. In the conversation record you can see the information: sender and receiver, priority, date and time, status.

Settings

- Auto Delete: On/Off
- Memory Status: Displays the amount of memory being used for Contacts and text messages.
- Signature: Set signature information.

Delete

- ALL: Delete all text messages stored in the Outbox, Inbox, Sentbox, Draftbox, Voice Mail.
- Inbox: Delete all Inbox text messages.
- Outbox: Delete all Outbox text messages.
- Sentbox: Delete all Sentbox text messages.
- Draftbox: Delete all Draftbox text messages.
- Voice Mail: Delete all Voice Mail .

Voice Mail

By selecting the Voice Mail menu, the phone will automatically access the Voice Mail service. Voice Mail can also be accessed by pressing and holding the “1” key in standby mode.

Picture Messaging (MMS)

Your cell phone can also send and receive MMS. This means you can send messages that contain photos, sounds, and text through a MMS service.

When sending a MMS message, the receiver must be using a MMS compatible cell phone in order for them to view your message.

Note: This feature can only be used with a network provider or service that supports MMS. MMS messages can only be received and viewed by devices with MMS compatibility or e-mail features. Please contact your local network operator for setting up MMS messaging.

Create a Picture Message (MMS)

To create a Picture Message:

1. Select Menu.
2. Select the Messages icon
3. Select Picture Messaging.
4. Select Create Picture Messaging.

Within Create Picture Messaging, you can enter the following fields:

- Receiver: Enter the number or e-mail address of the recipient.
- Edit Content: Edit the content of the MMS. Press “Edit” to enter the following options.
 - ♦ Insert: You can insert images, sounds or other elements using the cell phone or T-FLASH.
 - ♦ Preview: Preview the inserted multimedia elements.
 - ♦ Add: You can add a new page, theme, contact to CC, contact to BCC, or Slideshow Time: Set the time when the images change in the previewed multimedia message.
 - ♦ Slide timing: You can edit slide time;
- 4. Press the Left Soft key for the options to Send, Add, Save as draft, Save as Template.

Inbox

This menu allows you to review your received MMS messages.

- Open: View the content of a MMS message.
- Reply: Reply to the sender with a MMS, text, or e-mail message.
- Forward: Forward the selected MMS message to another person.
- Delete: Delete the current MMS message.
- Delete All: Delete all the MMS messages in the Inbox.
- Lock/Unlock: Message locked and cannot be deleted.

Outbox

MMS messages that failed to send or are being sent are stored in the Outbox. The following operations can be performed on the messages in the Outbox folder:

- Resend: Resend the selected MMS message.
- Delete: Delete the current MMS message.
- Delete All: Delete all the MMS messages in the Outbox.
- Lock/Unlock: Message locked and cannot be deleted.

Drafts

MMS messages can be optionally stored in Drafts after being edited. The following operations can be performed on messages in Drafts folder:

- Forward: Forward the selected message.
- Delete: Delete the current MMS message.
- Delete All: Delete all the MMS messages in the Drafts.
- Lock/Unlock: Message locked and cannot be deleted.

Sent

Successfully sent MMS messages are stored in the Sent folder. The following operations can be performed on messages in the Sent folder:

- Send Again: Resend the selected MMS message.
- Forward: Forward the selected message.
- Delete: Delete the current MMS message.
- Delete All: Delete all the MMS messages in the Inbox.
- Lock/Unlock: Message locked and cannot be deleted.

Templates

Edited MMS messages can be stored in Templates.

Settings

This menu allows you to make the following settings to the configuration for sending and receiving messages.

- Profile: Select a USCC Primary or USCC Secondary Network.
- Send:
 - ♦ Deliver Report: Set the Deliver Report to ON or OFF.
 - ♦ Save sent items: Set the save sent items to ON or OFF.
 - ♦ Priority: Select from three priority types: low, normal or high
 - ♦ Validity period: Set the validity period as Maximum, 1 week, 2 days, 1 day, 12 hours, 1 hours;
 - ♦ Delivery time: Set the delivery time as Immediate, 1 hour, 3 hours, 6 hours, or 12 hours.
 - ♦ Auto-deletion: Set the auto deletion to ON or OFF.
 - ♦ Message class: Set to Personal, Auto, Advertisement or Information the Message class.
 - ♦ Retry times: You can edit retry times (0-3).
- Receive:
 - ♦ Send Delivery Report: Set the Send Delivery Report to ON or OFF.
 - ♦ Retrieval Mode: Set the retrieval mode as automatic or manual.
- Edit Settings:
 - ♦ Signature: Set to ON or OFF
 - ♦ Slide Time: Set the switch time when previewing MMS message slideshows to 2 seconds, 5 seconds, 8 seconds, or 10 seconds.
- View Mode: Set the preview time to manual or automatic.
- Meg online album Initial default value is 4444 when another menu (like media player, recorder, camera) needs send an MMS to the online album, click "Send to online album".
- Memory Status: Display the usage rate and storage space of received and sent MMS messages.

- Restore default: Restore settings to their defaults.
- Save Picture Messages: Select the storage location as internal memory card or cell phone.

6.3 Call History

Call History can be accessed from the menu screen by selecting the Call History icon from the main menu.

Missed calls

If there are missed calls, you can view the detailed information in the 'missed calls' menu. Each record contains the number (and the contact name if number is already in the phonebook), date, time etc. Use the -Navigation Key to view the information about other missed calls. Press the 'Call control' key to dial the selected number and press the Right Soft key to return to higher-level menu.

Missed calls are divided into the following two categories:

1. If the number is not stored in the phone, the phone number will be displayed in the missed call list. Select the number and press the Left Soft key to access the sub-menu of this missed call, which includes the following items:
 - Delete: Delete this missed call number record.
 - Save to Contacts
 - Dial
 - Send message: Send text message /MMS message to the missed call number.
2. If this number is already stored in the phone, the caller's name will be displayed in the missed call list.

Received calls

The phone automatically saves information about the 20 most recently received calls. Functional operation and display mode is the same as those of missed calls.

Dialed calls

The phone automatically saves the 20 most recently dialed calls. Functional operation and display mode is the same as those of missed calls.

Delete log

- Delete Missed Calls: Delete all records of missed calls.
- Delete Received Calls: Delete all records of received calls.
- Delete Dialed Calls: Delete all records of dialed calls.
- Delete All: Delete all records of recent calls.

Call time

- Last Call Time
- Total Dialed: Total of all dialed calls time since the timer was last reset.
- Total Received: Total of all received calls time since the timer was last reset.
- Total Call Time
- Total Life Time
- Reset All Time

6.4 Multimedia

Multimedia features can be accessed by selecting the Multimedia Icon.

Audio Player

The music player is provided for you to play all music file types stored on the cell phone or storage card. Supported music file formats include: MP3, MIDI, AMR, AAC, WAV, and QCP. To access the Audio Player in idle mode, select [Menu] > [Multimedia] > [Audio Player].

The music player interface icons are sequentially: Previous, Pause, Play, Stop, and Next. You can move the cursor using the left and right Navigation Key and then press the “OK” key to perform an operation.

- Hide Audio player: Return to the multi-media menu list
- Add To play List: Add new music into the play list
- Listen By Bluetooth: Connect the phone with Bluetooth.
- Send: Use Bluetooth or online album to send music.
- Set To: Send the music to profiles
- Manager: Delete the selected music.
- File Attributes: Check the music attributes.
- Play Mode: Turn on or turn of repeat and random play mode.

Note: When adding new music to the phone, select “Update Playlist” at the first “Option” screen. When the Audio player is active, the buttons on the left side of the phone provide Rewind/Previous Selection, Pause/Play and Forward/next Selection choices.

Camera

The camera is also accessible within this menu screen. See the section on Camera for further details.

Recorder

This feature allows the recording of voice through the phone’s microphone. To access the Audio Player in idle mode, select [Menu]> [Multimedia]> [Recorder].

The files will be stored in the phone’s memory and the size of the file depends upon the amount of memory available. Standard functions for this feature include:

- Record
- Play
- Pause
- Stop
- Rewind
- Fast Forward

Note: Please obey all applicable laws when recording conversations.

This phone provides access to the BREW™ (binary runtime environment for wireless) catalogue downloading feature. The BREW Shop lets users browse the carrier's Application Download Server to see what applications are available for purchase or trial.

From the main menu screen, select the Download Icon.

Within the Download menu, there are two options: BREW™ and My Apps feature.

Within the Downloads, you can select Browse catalog or Search.

Within the Settings menu, you can select Order Apps, Move Apps, Manage Apps, Main Menu View, Screen Savers or View Log.

6.6 Camera

The camera can be accessed by:

By pressing the Camera button on the of the phone;

Selecting [Menu] > [Multimedia] > [Camera].

Selecting [Menu] > [Camera].

Once you are in the camera interface, you can use this feature to take pictures.

Note: Please follow local laws and regulations when using this cell phone to take pictures.

6.7 WAP

To access the Internet, select [Menu] > [WAP].

This feature allows your phone to browse the Internet.

- Home Page: A home page can be saved with each mode. When using WAP to browse, the home page for this mode will first be accessed.
- Enter URL: Enter the URL for the website to be viewed
- Search: Highlight to select a search engine to perform searches, then enter text criteria.
- History: Review the latest accessed web pages.

- **Bookmarks:** Multiple bookmarks can be created. Enter the Options menu and you can perform the following operations on Bookmarks:
 - ♦ **Open:** Log in to the selected web address.
 - ♦ **Add bookmark:** Add a new bookmark.
 - ♦ **Delete bookmark:** Delete the selected bookmark.
 - ♦ **Delete all bookmarks:** Delete all the bookmarks.
 - ♦ **Edit bookmark:** Edit the name and web address of the selected bookmark.
 - ♦ **Lock bookmark:** Lock the bookmark.
 - ♦ **Details:** View the details for the selected bookmark.
 - ♦ **Reset:** Restore default settings.
- **Push Box:** Store information on messages to notify the user about WAP site messages.
- **Save web pages:** Select to save a page for reviewing later.
- **Advanced Options:** Advanced options are primarily used to configure certain internet parameters and information.
- **About:** Display browser and platform version numbers.
- **Exit Browser:** Exit the browser and return to the menu interface.

6.8 Tools & Games

Select the Tools & Games Icon from the main menu, and then select Tools or Games.

Tools:

- **Gallery**

This phone provides memory space for use by the user. SD Micro cards (of optional capacity) are also supported. You can use these features to easily manage the directories and files stored on the cell phone or SD Micro card.

1. Enter Gallery
2. Go to "Phone" (or "Card" if available)

3. Select Open: Use this function to enter the root directory of the memory. Default system directories, created data directories, and account files will be listed at the root directory (the root directory will only contain system folders the first time the phone is turned on or if the user has yet to create any directories).
4. Or click “Options” to access the following operations:
 - ♦ Manage: The following actions can be performed on the files listed: copy to, move to, delete, rename, and property.
 - ♦ Add Option in the Manage menu:
 - Mark
 - New Directory
 - Memory Status: Display available space and total capacity.

• Alarm

You may set up to 6 alarms.

1. Use the Navigation Key in the tools main menu to select Alarm.
2. Use the Navigation Key to select one of the alarms and press the Left Soft key to access the alarm setting.
3. Use the Navigation Key in the alarm clock setting interface to select the alarm clock setting content. You may set the alarm clock using State (On/Off), Time, Mode and Prompt.
4. AM/PM is set by pressing the center of the Navigation Key.
5. When you have selected and set each item, use the Navigation Key to select the next line; when you have selected time, you can input the time directly.

• Notes

Enter Notes menu, then select Create Note.

1. Enter the Note text.

2. When entering text, press the Left Soft key, to select “Advanced input” on the pop menu. In this mode, you can select other input methods, including Smart English input.
3. From the note list, select Option to access: Create Note, This Note (includes edit, delete, unmarksend by Bluetooth) Mark mode and Memory status;

- Calculator

The Calculator can perform four standard operations (add, subtract, multiply, divide). Use the numeric keys 0-9 to input a value.

The layout of the calculator matches the keypad, so that multiplication is performed with the “X” key, the Enter Key is the Left Soft key sign, addition is the “+” key and so on. You can also press the Navigation Key to select one of the four operations: add, subtract, multiply and divide.

1. Press the number keys to enter a value.
2. Select an operation.
3. Press numeric keys to input the second operation value.
4. Select the = key. The result will be displayed on the screen.

To perform multiple mathematical operations, you must press equal (=) after each operation.

Note: * Key can use for input radix point, # key can use for input positive and negative number.

- Stopwatch

This unit provides two stopwatch functions: common mode and loop mode. The Common Mode is a simple stopwatch.

1. Press “Begin” to start timing.
2. Press OK Key to stop.
3. Press again to continue timing. If there is a time noted, press the OK key to clear.

The Loop Mode is so that additional time segments can be added, started and stopped to record various activities within the event. The “add” button adds another loop while recording the previous loop’s time.

- World Time

To view the time in different locations of the world, scroll right/left across the map.

- Calendar

You can view the current date or scroll the calendar to view other months.

You can also view weekly or daily calendar entries, by going to:

1. Select “Option”
2. Select Week View or Day View

- Schedule

You may schedule an event into the calendar, with date, time and an alarm to notify you of that event.

1. Scroll to a date,
2. Select “Option”
3. Select “Make a note”
 - ♦ Type of event: Meeting, Call, Birthday, Memo, etc.
 - ♦ Entering Subject, Location, Time, etc
 - ♦ Repeat, Alarm, Alarm Date
 - ♦ Done
 - ♦ Save

- Bluetooth

The Bluetooth features of the phone can be accessed by selecting the Bluetooth Icon from the menu screen.

To set up a new Bluetooth device:

1. Select Device Search: When a Bluetooth device is enabled, all Bluetooth hands free devices and Bluetooth devices will be searched for. Bluetooth devices are then added and paired.
2. After detecting a Bluetooth hands free device, a Bluetooth password must be entered to perform the pairing. (Bluetooth passwords are set by other Bluetooth devices.)
3. Once pairing completes, it will connect with the device.

Other options include:

- Discoverable: Enable this function to find nearby devices.
- Found Devices: Display detected devices.
- Manage: List the devices connect to the cell phone. Bluetooth hands free devices and Bluetooth devices can be deleted and configured.
 - ♦ Pair: Pair with the device selected.
 - ♦ Remove: Remove the selected device from the list.
 - ♦ Connect: Select the right Bluetooth device and connect it.
 - ♦ Browse Files: When browsing files, the selected device must be successfully paired.
 - ♦ Setup Bluetooth: Enable and disable Bluetooth, rename, and device status.
- Unit Converter

You can select from the following options for conversion:

Currency, Area, Length, Mass, Temperature, Velocity and Volume.

Games:

This handset provides two full-graphic games: Russian Block and Snake.

1. To access Games, select [Menu] > [Tools & Games] > [Games].
2. Press the Menu/Left Soft key to confirm.
3. When the game interface and description of the selected game appears, press the Menu/ Left Soft key again to start the game.

Both games allow turning the audio On/Off and provide Help and High Scores. Please see the menu for each game for Rules and Help.

6.9 Settings

Settings features can be accessed from the menu screen by selecting the Settings icon from the main menu.

Phone Setup

- Language: Choose English or Espanol
- Greeting: Switch between Enable and Disable. The greeting is shown when the phone is powered on and can be edited by highlighting the current greeting and pressing the left soft/menu
- Clock Format: Set between 12 hour (w/AM and PM) or 24 hour.
- Date Format: There are three type can be selected.
DD/MM/YYYY,MM/DD/YYYY,YYYY/MM/DD.
- Location: Turn on or turn off the GPS function.
- Voice readout: Select from Keypad Digits, Contact List Entries, or Recent Call Entries.
- USB Disk Mode: Enables the transfer of data between a PC and the installed microSD card on the phone using the data cable.

Display Setup

- Wallpaper: Select a picture for the background image on the phone.
- LCD Backlight: The backlight time can be set to turn off after 10, 20, or 30 seconds. It can also be set to always on, however the longer a backlight is on the faster the battery will drain.
- Brightness: You can select the brightness level of the LCD backlight pressing the Navigation Key left or right.
- Main Menu: You can set the main menu as Icon or List mode.

- Themes: Select from three themes.

Call Setup

- Answer Options: Select Flip Open, Any Key or Send Only to answer a call.
- Emergency Alert: Select Ring & Vibrate or Vibrate Only.
- Call Duration Reminder: Set the reminder to sound during calls at 45 seconds, 50 seconds, 55 seconds, or off.
- Call Connect Notification: If this feature is turned on, then a notification will sound each time a call is connected.
- DTMF Tones: short or long for your choose ;
- TTY Mode: This menu lists as TTY Off, TTY Full, TTY VCO, TTY HCO.
- Auto Redial: Disable or Enable.

Security Setup

To make changes in the Security menu, you must correctly input the phone password. The initial password is 0000.

- Phone Lock: If “Enabled”, when the phone is powered on you will be prompted to enter the phone’s password correctly to use the phone.
- Keypad Lock: The keypad lock can be set to be enabled after 5 seconds, 30 seconds, 60 seconds, or 5 minutes. To unlock the keypad, press “*” then the Answer/Send key. Even when locked, you may answer an incoming call.
- Call History Lock: If enabled the phone will require the password to be entered each time you access the phone’s Call History.
- Phonebook Lock: If enabled, the phonebook cannot be viewed until the password is entered.
- Message Lock: If enabled, the phone will require the password to be entered to access messages.
- Restrictions: Input password 0000, this function can be used for restricting incoming calls

and outgoing calls, receiving and sending SMS and MMS. Change Password: Change the password using this option. The Old Password must be entered before a new one is accepted. Enter the same new password twice and press the left soft/menu key to confirm. The new password will then become effective. During this course you may press the right soft key to discard the change at any time and return to higher-level menu. You can create separate passwords for the phone password, the call history password, the phonebook password, and the message password, restrictions password.

- Restore Factory Settings: This function is used for restoring the phone to its default factory settings.

Phone Info

- Base phone Information: Displays the information about the phone.
- Icon Glossary: List all icon glossary.

6.10 Profiles

The Profiles setting is used to customize the phone's alerts and ringtones. To select and personalize the Profile settings, select the Profiles icon from the main menu.

There are five predefined profile settings which can be customized: Normal, Loud, Vibrate, Silent, and Airplane Mode.

Note: in Airplane Mode, please consult airline staff about the use of Airplane Mode in flight. Turn off your phone whenever instructed to do so by airline staff. Airplane Mode turns off your phone's calling features in locations where wireless phone use is prohibited. You cannot make or receive calls in Airplane Mode, but you can use your phone's other non-calling features

- Activate
Set to be current active profile.
- Personalize
You are able to customize the following settings for each of the above choices:

- ♦ Incoming call alert: Alert method for incoming calls.
- ♦ Voice volume: Set the speaker volume.
- ♦ Ringtone: Select the incoming ring tone.
- ♦ Ring volume: Set the ring volume for incoming calls.
- ♦ Vibrating alert: Select whether or not to enable vibration.
- ♦ Message alert tone: Select the text message alert tone.
- ♦ Roaming Ringtone
- ♦ Keypad tone: Set the keypad tone.
- ♦ Auto Answer: Set auto answer time.
- ♦ Speakerphone: Select whether or not to enable the speaker.

6.11 Tone Room Deluxe

Allows you to access the most popular ringtones directly from your phone. Browsing ToneRoom may result in data charges. Please refer to your service provider.

6.12 Pac-Man

Allows you to use the preloaded PAC-MAN application. User charges may apply.

6.13 Voice Commands

Press right side up key to enter the voice recognition menu. The following menu options appear:

- Call (Name or #)
- Send Message (Name or #)
- Go To (Menu)
- Check (Item)
- Lookup(Name)
- Redial

- Play (playlist)
- Help

Press the Right Soft key to enter the setting menu, the following menu appears:

- Confirmation
You can control when the system asks you to confirm a name or number. You can select Automatic, always confirm or never confirm.
- Adaptation
Adaptation will take a couple of minutes to complete Adapt in a quiet room. Press start to begin.
- Audio Modes
Use audio modes to set the level of audio assistance. You can select Expert Mode, Prompt Mode or Readout Mode.
- About
About the voice recognition version.

7 Safety and Warranty

This chapter addresses the safety guidelines and precautions to follow when operating your phone. Before operating your phone, please be aware of all the safety details. This chapter contains the terms and conditions of services and the warranty for your phone. Please review them thoroughly.

7.1 TOTAL SYSTEM RELIABILITY VALIDATION

User Interactions and Responsibilities

Reference: IEEE 1725, Section 9.2

Purpose: Determine that required user information is provided.

Procedure: Determine by inspection that the following information is made available to the user

by one or more of (a) printed on the label for the battery, (b) printed on the label for the host device, (c) printed in the owner's manual, and/or (d) posted in a help file or Internet web site.

- a) Do not disassemble or open crush, bend or deform, puncture or shred
- b) Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.
- c) Only use the battery for the system for which it is specified
- d) Only use the battery with a charging system that has been qualified with the system per CTIA Certification Requirements for Battery System Compliance to IEEE 1725. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- e) Do not short circuit a battery or allow metallic conductive objects to contact battery terminals.
- f) Replace the battery only with another battery that has been qualified with the system per this standard, IEEE-Std-1725-200x. Use of an unqualified battery may present a risk of fire, explosion, leakage or other hazard.
- g) Promptly dispose of used batteries in accordance with local regulations
- h) Battery usage by children should be supervised.
- j) Avoid dropping the phone or battery. If the phone or battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- k) Improper battery use may result in a fire, explosion or other hazard.

For those host devices that utilize a USB port as a charging source, the host device's user manual shall include a statement that the phone shall only be connected to CTIA certified adapters, products that bear the USB-IF logo or products that have completed the USB-IF compliance program.

Compliance: Language that communicates the intention of each of the above warnings is

included with the product. For non-user-replaceable batteries use sections: a, b, d, g, j, k and the final USB-IF statement.

7.2 SAFETY INFORMATION FOR WIRELESS HANDHELD PHONES

READ THIS INFORMATION BEFORE USING YOUR HANDHELD/PORTABLE CELLULAR TELEPHONE EXPOSURE TO RADIO FREQUENCY SIGNALS

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals.

In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

ANSI C95.1 (1992) *

NCRP Report 86 (1986) *

ICNIRP (1996) *

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C951).

The design of your phone complies with the FCC guidelines (and those standards).

1*: American National Standards Institute.

2*: National Council on Radiation protection and measurements.

3*: International Commission on Nonionizing Radiation Protection.

ANTENNA SAFETY

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations. Please contact your local dealer for replacement antenna. Do not use the

phone with a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for replacement antenna.

DRIVING SAFETY

Talking on the phone while driving is extremely dangerous and is illegal in some states. Remember, safety comes first. Check the laws and regulations on the use of phones in the areas where you drive. Always obey them. Also, if using your phone while driving, please:

- Give full attention to driving. Driving safely is your first responsibility.

- Use hands-free operation, if available.

- Pull off the road and park before making or answering a call, if driving conditions so require. If you must use the phone while driving, please use one-touch, speed dialing, and auto answer modes. An airbag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the airbag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

WARNING: Failure to follow these instructions may lead to serious personal injury and possible property damage.

ELECTRONIC DEVICES

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is

ON, it receives and also sends out radio frequency (RF) signals. Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Therefore, use of your phone must be restricted in certain situations.

PACEMAKERS

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid

potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers:

Always keep the phone more than six inches from your pacemaker when the phone is turned on.

Do not carry the phone in a breast pocket.

Use the ear opposite the pacemaker to minimize the potential for interference.

If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

HEARING AIDS

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives).

OTHER MEDICAL DEVICES

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your phone OFF in healthcare facilities when any regulations posted in these areas instruct you to do so. Hospitals or healthcare facilities may be using equipment that could be sensitive to external RF energy.

VEHICLES

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

POSTED FACILITIES

Turn your phone OFF where posted notices so require.

OTHER SAFETY GUIDELINES

AIRCRAFT

FCC regulations prohibit using your phone while in the air. Turn your phone OFF before boarding an aircraft. Always request and obtain prior consent and approval of an authorized airline representative before using your phone aboard an aircraft. Always follow the instructions of the airline representative whenever using your phone aboard an aircraft, to prevent any possible interference with airborne electronic equipment.

BLASTING AREAS

To avoid interfering with blasting operations, turn your phone OFF when in a “blasting area” or in areas posted: “Turn off two-way radio.” Obey all signs and instructions.

POTENTIALLY EXPLOSIVE ATMOSPHERES

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle’s engine.

PRECAUTIONS

Your Handheld Portable Telephone is a high quality piece of equipment. Before operating, read all instructions and cautionary markings on (1) AC/DC Travel Adaptor (2) Battery and (3) Product Using Battery.

Failure to follow the directions below could result in serious bodily injury and/or property damage due to battery liquid leakage, fire or rupture.

DO NOT use this equipment in an extreme environment where high temperature or high humidity exists.

DO NOT abuse the equipment. Avoid striking, shaking or shocking. When not using, lay down the unit to avoid possible damage due to instability.

DO NOT expose this equipment to rain or spilled beverages.

DO NOT use unauthorized accessories.

DO NOT disassemble the phone or its accessories. If service or repair is required, return unit to an authorized PCD cellular service center. If unit is disassembled, the risk of electric shock or fire may result.

DO NOT short-circuit the battery terminals with metal items etc.

7.3 SAFETY INFORMATION FOR FCC RF EXPOSURE

WARNING! READ THIS INFORMATION BEFORE USING CAUTIONS

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

BODY-WORN OPERATION

This device was tested for typical body-worn operations with the back of the phone kept 1.5 cm. from the body. To maintain compliance requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm separation distance between the user's Body and the back of the phone, including the antenna. The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

For more information about RF exposure, please visit the FCC website at www.fcc.gov.

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 1.263 W/Kg and when worn on the body, as described in this user guide, is 0.955 W/ Kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The SAR testing for Body-worn operation was performed with a belt clip that provided a 15mm separation. The User's Manual indicates that any holsters/clips used with this device should contain no metallic components.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/ea> after searching on U46-CDM2080.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at <http://www.wow-com.com>.

* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

7.5 HEARING AID COMPATIBILITY HAC FOR WIRELESS TELECOMMUNICATIONS DEVICES

PCD'S COMMITMENT

PCD believes that all of our customers should be able to enjoy the benefits of digital wireless technologies. We are committed to providing a selection of compatible devices for our customers who wear hearing aids.

THIS PHONE HAS A HAC RATING OF M3/T3 WHAT IS HEARING AID COMPATIBILITY?

The Federal Communications Commission has implemented rules and a rating system designed to enable people who wear hearing aids to more effectively use these wireless telecommunications

devices. The standard for compatibility of digital wireless phones with hearing aids is set forth in American National Standard Institute (ANSI) standard C63.19. There are two sets of ANSI standards with ratings from one to four (four being the best rating): an “M” rating for reduced interference making it easier to hear conversations on the phone when using the hearing aid microphone, and a “T” rating that enables the phone to be used with hearing aids operating in the telecoil mode thus reducing unwanted background noise.

HOW WILL I KNOW WHICH WIRELESS PHONES ARE HEARING AID COMPATIBLE?

The Hearing Aid Compatibility rating is displayed on the wireless phone box.

A phone is considered Hearing Aid Compatible for acoustic coupling (microphone mode) if it has an “M3” or “M4” rating. A digital wireless phone is considered Hearing Aid Compatible for inductive coupling (telecoil mode) if it has a “T3” or “T4” rating.

HOW WILL I KNOW IF MY HEARING AID WILL WORK WITH A PARTICULAR DIGITAL WIRELESS PHONE?

You’ll want to try a number of wireless phones so that you can decide which works the best with your hearing aids. You may also want to talk with your hearing aid professional about the extent to which your hearing aids are immune to interference, if they have wireless phone shielding, and whether your hearing aid has a HAC rating.

FOR MORE INFORMATION ABOUT HEARING AIDS AND DIGITAL WIRELESS PHONE

FCC Hearing Aid Compatibility and Volume Control –

<http://www.fcc.gov/cgb/dro/hearing.html>

Hearing Loss Association of America –

<http://www.hearingloss.org/learn/cellphonetech.asp>

CTIA – <http://www.accesswireless.org/hearingaid/>

Gallaudet University, RERC – <http://tap.gallaudet.edu/voice>



U.S. FOOD AND DRUG ADMINISTRATION - CENTER FOR DEVICES AND RADIOLOGICAL HEALTH CONSUMER UPDATE ON WIRELESS PHONES

1. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

2. What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists. Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- Design wireless phones in a way that minimizes any RF exposure to the user that is not

necessary

for device function; and

- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health.

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

National Institute for Occupational Safety and Health

Environmental Protection Agency

Federal Communications Commission

Occupational Safety and Health Administration

National Telecommunications and Information Administration

The National Institutes of Health participates in some inter-agency working group activities, as well. FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones. FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the subject of the safety questions discussed in this document.

3. What kinds of phones are the subjects of this update?

The term “wireless phone” refers here to hand-held wireless phones with built-in antennas, often called “cell”, “mobile,” or “PCS” phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and

the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

4. What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals.

However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be predisposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health. Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

5. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years' follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do - may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

6. What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues. FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to

independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

7. How can I find out how much radiofrequency energy exposure I can get by using my wireless phone?

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/ kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (<http://www.fcc.gov/oet/rfsafety>) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

8. What has FDA done to measure the radiofrequency energy coming from wireless phones?

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human head.

Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/ kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

9. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?

If there is a risk from these products—and at this point we do not know that there is—it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance.

For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

10. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the

RF source will reduce RF exposure. Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

11. What about wireless phone interference with medical equipment?

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI. FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that that no interference occurs when a person uses a “compatible” phone and a “compatible” hearing aid at the same time. This standard was approved by the IEEE in 2000. FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

12. Where can I find additional information?

For additional information, please refer to the following resources:

FDA web page on wireless phones (<http://www.fda.gov/cellphones>)

Federal Communications Commission (FCC) RF Safety Program

(<http://www.fcc.gov/oet/rfsafety>)

International Commission on Non-Ionizing Radiation Protection (<http://www.icnirp.de>)

World Health Organization (WHO) International EMF Project (<http://www.who.int/emf>)

Health Protection Agency (UK) (<http://www.hpa.org.uk/radiation/>)

7.7 AVOID POTENTIAL HEARING LOSS

Prolonged exposure to loud sounds (including music) is the most common cause of preventable hearing loss. Some scientific research suggests that using portable audio devices, such as portable music players and cellular telephones, at high volume settings for long durations may lead to permanent noise-induced hearing loss. This includes the use of headphones (including headsets, earbuds and Bluetooth® or other wireless devices). Exposure to very loud sound has also been associated in some studies with tinnitus (a ringing in the ear), hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies.

The amount of sound produced by a portable audio device varies depending on the nature of the sound, the device, the device settings and the headphones. You should follow some commonsense recommendations when using any portable audio device:

Set the volume in a quiet environment and select the lowest volume at which you can hear adequately.

When using headphones, turn the volume down if you cannot hear the people speaking near you or if the person sitting next to you can hear what you are listening to.

Do not turn the volume up to block out noisy surroundings. If you choose to listen to your portable device in a noisy environment, use noise-cancelling headphones to block out background environmental noise.

Limit the amount of time you listen. As the volume increases, less time is required before your hearing could be affected.

Avoid using headphones after exposure to extremely loud noises, such as rock concerts, that might cause temporary hearing loss. Temporary hearing loss might cause unsafe volumes to sound normal.

Do not listen at any volume that causes you discomfort. If you experience ringing in your ears, hear muffled speech or experience any temporary hearing difficulty after listening to your portable audio device, discontinue use and consult your doctor.

YOU CAN OBTAIN ADDITIONAL INFORMATION ON THIS SUBJECT FROM THE FOLLOWING SOURCES:

American Academy of Audiology
11730 Plaza American Drive, Suite 300
Reston, VA 20190

Voice: 800-AAA-2336

Email: info@audiology.org

Internet: www.audiology.org

National Institute on Deafness and Other Communication Disorders National Institutes of Health
31 Center Drive, MSC 2320
Bethesda, MD USA 20892-2320

Voice: (301) 496-7243

Email: nidcdinfo@nidcd.nih.gov

Internet: <http://www.nidcd.nih.gov/health/hearing>

National Institute for Occupational Safety and Health
Hubert H. Humphrey Bldg.
200 Independence Ave., SW

Washington, DC 20201

Voice: 1-800-CDC-INFO (1-800-232-4636)

Internet: <http://www.cdc.gov/niosh/topics/noise/default.html>

Do not turn the volume up to block out noisy surroundings. If you choose to listen to your portable device in a noisy environment, use noise-cancelling headphones to block out background environmental noise.

7.8 FCC COMPLIANCE INFORMATION

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received. Including interference that may cause undesired operation.

INFORMATION TO THE USER

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful Interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if Not installed and used in accordance with the instructions, may cause harmful Interference to radio communications. However, there is no guarantee that interference will not occur in a particular Installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver.

Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for assistance.

CAUTION: Changes or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables.

7.9 12 MONTH LIMITED WARRANTY

Personal Communications Devices, LLC. (the "Company") warrants to the original retail purchaser of this handheld portable cellular telephone, that should this product or any part thereof during normal consumer usage and conditions, be proven defective in material or workmanship that results in product failure within the first twelve (12) month period from the date of purchase, such defect(s) will be repaired or replaced (with new or rebuilt parts) at the Company's option, without charge for parts or labor directly related to the defect(s).

The antenna, keypad, display, rechargeable battery and battery charger, if included, are similarly warranted for twelve (12) months from date of purchase. This Warranty extends only to consumers who purchase the product in the United States or Canada and it is not transferable or assignable.

This Warranty does not apply to:

- (a) Product subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;
- (b) Product whose mechanical serial number or electronic serial number has been removed,

altered or defaced.

(c) Damage from exposure to moisture, humidity, excessive temperatures or extreme environmental conditions;

(d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;

(e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts;

(f) Product damaged from external causes such as fire, flooding, dirt, sand, weather conditions, battery leakage, blown fuse, theft or improper usage of any electrical source.

The Company disclaims liability for removal or reinstallation of the product, for geographic coverage, for inadequate signal reception by the antenna or for communications range or operation of the cellular system as a whole.

When sending your wireless device to Personal Communications Devices for repair or service, please note that any personal data or software stored on the device may be inadvertently erased or altered. Therefore, we strongly recommend you make a back up copy of all data and software contained on your device before submitting it for repair or service. This includes all contact lists, downloads (i.e. third-party software applications, ringtones, games and graphics) and any other data added to your device. In addition, if your wireless device utilizes a SIM or Multimedia card, please remove the card before submitting the device and store for later use when your device is returned, Personal Communications Devices is not responsible for and does not guarantee restoration of any third-party software, personal information or memory data contained in, stored on, or integrated with any wireless device, whether under warranty or not, returned to Personal Communications Devices for repair or service.

To obtain repairs or replacement within the terms of this Warranty, the product should be delivered with proof of Warranty coverage (e.g. dated bill of sale), the consumer's return address, daytime phone number and/or fax number and complete description of the problem,

transportation prepaid, to the Company at the address shown below or to the place of purchase for repair or replacement processing. In addition, for reference to an authorized Warranty station in your area, you may telephone in the United States (800) 229-1235, and in Canada (800) 465-9672 (in Ontario call 416-695-3060).

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR AN SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. THE COMPANY SHALL NOT BE LIABLE FOR THE DELAY IN RENDERING SERVICE UNDER THIS WARRANTY OR LOSS OF USE DURING THE TIME THE PRODUCT IS BEING REPAIRED OR REPLACED.

No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states or provinces do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitation or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state or province to province.

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- IN CANADA: Personal Communications Canada Ltd
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